Northern Virginia Community College

Good Housekeeping &
Pollution Prevention Manual

A Programmatic Overview of NOVA's Good Housekeeping and Pollution Prevention Practices

October 2026

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Alexandria, VA 22311

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Annandale, VA 22003

Loudoun Campus
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For reporting pollution into stormwater runoff contact Evan Wright Manager, Environmental Services or designee at (703) 764-0543.

Northern Virginia Community College

Wetland Studies and Solutions, Inc. a DAVEY company

TABLE OF CONTENTS

1.0 INTRODUCTION AND PURPOSE **1**
2.0 GOOD HOUSEKEEPING AND POLLUTION PREVENTION TRAINING **2**
3.0 DOCUMENTATION AND REPORTING **4**
3.1 Annual Reporting to DEQ 5
3.2 Good Housekeeping & Pollution Prevention Program Updates and Modifications 5
4.0 STORMWATER POLLUTION PREVENTION PLAN **6**
4.1 Defining an Illicit Discharge 6
4.2 Awareness During Daily Activities and Operations 8
4.3 Special Local Water Quality Concerns 8
4.4 Good Housekeeping & Pollution Prevention Inspections 9
4.5 SWPPP Map 10
5.0 MAINTENANCE & OPERATIONS PROCEDURES **11**
5.1 Vehicle Washing 12
5.2 Vehicle/Equipment Maintenance 13
5.3 Vehicle/Equipment Storage 14
5.4 Fueling 15
5.5 Dumpsters - Solid Waste Collection and Recycling 16
5.6 Chemical Storage 17
5.7 Outdoor Loading 18
5.8 Outdoor Material Storage 19
5.9 Outdoor Material Stockpiling 20
5.10 Salt Storage/Operations 21
5.11 Power Washing 22
5.12 Pesticide Application 23
5.14 Parking Structure Cleaning 25
5.15 Storm Drain Maintenance 26
5.16 Exterior Building Maintenance 27
5.17 Landscape Management 28
5.18 Road and Sidewalk Maintenance 29
5.19 Dewatering Structures 30
5.20 Absorbent Matting Maintenance 31
5.21 Discharges of Water Pumped from Construction or Maintenance Activities 32
5.22 Fertilizer Use and Storage 33
5.23 Temporary Storage of Landscaping Materials 34
6.0 WASTE MANGEMENT & DISPOSAL PROCEDURES **35**
6.1 Aerosol Cans 35
6.2 Animal Carcasses 35
6.3 Antifreeze 35
6.4 Batteries 36
6.5 Empty Containers 36
6.6 E-Waste (Monitors and Computers) 36
6.7 Filters - Oil, Gas, or Diesel 37
6.8 Fluorescent Lamps, HID, and Metal Halide Lights 37
6.9 Fluorescent Light Ballasts (PCB and Non-PCB) 38
6.10 Landscape Materials 38

6.11 Mercury Switches and Equipment 38
6.12 Oil, Gas, Diesel, and Cooking Grease Waste 39
6.13 Paint Waste - Latex, Solvent, or Oil-Based 39
6.14 Parts Cleaners 39
6.15 Pesticides 40
6.16 PCB-containing Materials 41
6.17 Rags, Wipes, and Absorbents 41
6.18 Refrigerants 42
6.19 Scrap Tires 42
6.20 Solid Waste Trash 42
6.21 Surplus and Excess Property 42
6.22 Treated Lumber 43
7.0 SALT MANAGEMENT STANDARD OPERATING PROCEDURES **44**
7.1 Salt Application Best Management Practices 44
7.2 Salt Tracking 45
7.3 Education and Outreach 46
7.4 Adaptive Management and Review 46

APPENDICES

Appendix A: Contractor Good Housekeeping and Pollution Prevention Log
Appendix B: Spill Response Procedures
Appendix C: B&G Contractor Snow Operations Log

ACRONYMS

BMP	Best Management Practice
DEQ	Department of Environmental Quality
EPA	Environmental Protection Agency
MS4	Municipal Separate Stormwater Sewer System
NPDES	National Pollutant Discharge Elimination System
NOVA	Northern Virginia Community College
SDS	Safety Data Sheets (formerly MSDS)
SWPPP	Stormwater Pollution Prevention Plan
TMDL	Total Maximum Daily Load
VESMP	Virginia Erosion and Stormwater Management Program

1.0 INTRODUCTION AND PURPOSE

Northern Virginia Community College (NOVA) engages in a variety of activities that have the potential to influence surface water quality. This manual presents the standard protocol which NOVA will utilize to implement its Good Housekeeping & Pollution Prevention Program. The manual provides a set of written procedures and Best Management Practices (BMPs) which are meant to ensure that facility operations are managed in ways that will minimize pollutants from entering adjacent municipal separate storm sewer system (MS4).

The MS4 program is part of the Federal National Pollutant Discharge Elimination System (NPDES), which is authorized through the Clean Water Act. With delegation from the Environmental Protection Agency (EPA), MS4 permits in Virginia are issued through the Virginia Pollutant Discharge Elimination System (VPDES) and administered by the Virginia Department of Environmental Quality (DEQ).

NOVA's Good Housekeeping & Pollution Prevention Manual includes five distinct components:

- **Training** – Procedures to train applicable Facilities staff related to the Program are discussed in Section 2.0 of this manual.
- **Documentation and Reporting** – Procedures to document all efforts related to the Good Housekeeping & Pollution Prevention process are outlined in Section 3.0 of this manual.
- **Good Housekeeping & Pollution Prevention Inspections** – Procedures and schedules for inspection of the NOVA campuses with the Stormwater Pollution Prevention Plan (SWPPP) map is outlined in Section 4.0 of this manual.
- **Maintenance & Operational Procedures –** Procedures for daily maintenance and operational activities observed at the NOVA campuses are outlined in Section 5.0 of this manual.
- **Waste Management & Disposal Procedures** – Procedures for waste management and disposal of pollutants are outlined in Section 6.0 of this manual.

2.0 GOOD HOUSEKEEPING AND POLLUTION PREVENTION TRAINING

The MS4 Permit requires NOVA to provide training once every 24 months to applicable maintenance and operations staff, identified by the Manager, Environmental Services, or designee who plays a role in the recognition and reporting of Good Housekeeping & Pollution Prevention. As part of NOVA's Program, this manual serves as training material to meet the permit requirement.

The written procedures herein serve as the foundation for a successful Good Housekeeping & Pollution Prevention Program that assists NOVA in achieving MS4 Permit compliance. However, implementation and documentation of the procedures are critical for achieving the Good Housekeeping & Pollution Prevention Program goal to eliminate non-stormwater discharges to NOVA's storm sewer system and ultimately receiving surface waters. As referenced throughout this Manual, the Good Housekeeping & Pollution Prevention Program relies on staff knowledge and supplemental materials to assist with implementation and documentation. Applicable maintenance and operations staff should be familiar with each section of this Manual and the supplemental materials provided in the Appendices:

- **Contractor Good Housekeeping and Pollution Prevention Log –** Appendix A is used by the Facilities department for contractors contracted to perform work on campus.
- **Spill Response Procedures** – Appendix B is a step-by-step instructional reference for spill response to be used by maintenance staff.

In addition to the documentation above, NOVA incorporates by reference the following:

- **MS4 Training Video & Quiz** – Once every two years applicable maintenance and operations staff watch a training video and take a quiz. The quiz is used for documentation purposes.
- **SWPPP Map** – The SWPPP map identifies campus locations most likely to generate pollutants that could be exposed to stormwater runoff, indicates surface flow directions, and identifies discharge locations from the campus. A copy of the map is accessible to all staff that play a role in Good Housekeeping & Pollution Prevention. The map should be utilized during field inspections as guidance for inspection locations and location-specific concerns.
- **SWPPP Inspection Form** – The SWPPP Inspection Form is used in conjunction with the SWPPP map and completed annually by the Director of Facilities or designee.
- **SWPPP Inspection Summary** – This is used by the NCCC Director of Facilities or designee to follow-up on items identified in the annual SWPPP inspection. It is located within the MS4 Tracking Spreadsheet.
- **Spill Log** – This is used by the NOVA Director of Facilities or designee to follow-up on for spills (good housekeeping issues) found during daily operations or reports from students, faculty, or staff. It is located within the MS4 Tracking Spreadsheet.
- **Nutrient Management Plan (NMP)** – This plan includes conservative practices for the use of nutrients such as fertilizer, and how they can be effectively applied while minimizing adverse effects to surface waters. It is located at each property with a NMP.

Applicable field personnel shall be employees performing road, street, sidewalk, and parking lot maintenance shall receive training in good housekeeping procedures; working in and around facility maintenance shall receive training in applicable Part I.E.6.a and b good housekeeping procedures required no less often than once per 24 months; and working in and around high-priority facilities with a stormwater pollution prevention plan (SWPPP) shall receive training in applicable site specific SWPPP procedures.

Contractors who perform work on campus are made aware of the requirements of this manual when they arrive on campus to perform work via the Contractor Good Housekeeping and Pollution Prevention Log.

Employees and contractors hired by NOVA who apply pesticides and herbicides shall be trained and certified in accordance with the Virginia Pesticide Control Act (§ 3.2-3900 et seq. of the Code of Virginia). Certification by the Virginia Department of Agriculture and Consumer Services (VDACS) Pesticide and Herbicide Applicator program shall constitute compliance with this requirement. Contracts for the application of pesticide and herbicides executed after the effective date of this permit shall require contractor certification.

NOVA shall maintain documentation of each training activity conducted by NOVA to fulfill the requirements of Part I.E.6.d for a minimum of three years after training activity completion. The documentation shall include the following information:

- The date when applicable employees have completed the training activity;
- The number of employees who have completed the training activity; and
- The training objectives and good housekeeping procedures covered by training activity.

NOVA may fulfill the training requirements through regional training programs involving two or more MS4 permittees; however, NOVA shall remain responsible for ensuring compliance with the training requirements.

Training required by the General Permit that is not applicable to NOVA includes the following:

- Training to employees in and around recreational facilities because NOVA does not have recreational facilities; and
- Emergency responders such as firefighters and law-enforcement officers, trained on the handling of spill control and response as part of a larger emergency response training because although NOVA does have campus police, campus police call Spotsylvania County emergency responders trained in handling spill control and emergency response.

3.0 DOCUMENTATION AND REPORTING

NOVA Facilities staff are the first line of defense for preventing generating sites from contributing to an illicit discharge. If Facilities staff detects an Illicit discharge as defined in Section 4.1, report the illicit discharge immediately to the Manager, Environmental Services or designee who shall report the discharge to DEQ within 24 hours. See the IDDE manual for illicit discharge reporting requirements and procedures.

VDOT and the campus-associated counties and municipalities have interconnected MS4s with NOVA, meaning there is stormwater being conveyed to and from NOVA property via a point source discharge. Any report from an interconnected MS4 of an illicit discharge originating from a NOVA campus should be immediately reported to the Manager, Environmental Services or designee for investigation and documentation.

Actions that are taken to prevent an illicit discharge are designated as good housekeeping practices and do not need to be reported to DEQ. Facilities staff shall report a good housekeeping issue within 24 hours to the Manager, Environmental Services or designee. Either a Findings & Follow-up Form in Appendix B or the Spill Log in the MS4 Tracking spreadsheet shall be used to document good housekeeping issues. Documentation will enable NOVA to access this information if future requests are received concerning the good housekeeping issue in question.

A good housekeeping issue may also be reported by students, faculty, staff, or contractors. These individuals may recognize a good housekeeping issue after learning about pollution in stormwater runoff through NOVA's public education and outreach efforts, or by other means. The NOVA stormwater webpage directs these individuals to contact the Manager, Environmental Services or designee, who will subsequently perform the appropriate follow-up action and complete the documentation. If Facilities staff are notified of a good housekeeping issue, appropriate action should be taken, and the Manager, Environmental Services or designee shall be notified. Figure 1 summarizes this procedure.

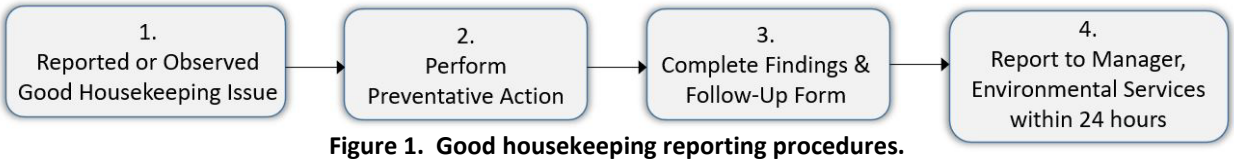

Figure 1. Good housekeeping reporting procedures.

The Good Housekeeping & Pollution Prevention Findings & Follow-up Form in Appendix B demonstrates that any issues found were appropriately addressed, and includes the following information:

- Date of incident;
- Material discharged, released, or spilled;
- Quantity discharged, released or spilled;
- Resolution details; and
- Follow-up on an issue.

3.1 Annual Reporting to DEQ

NOVA must annually report to DEQ information pertaining to its Good Housekeeping & Pollution Prevention efforts. The information is included in NOVA's MS4 Annual Report due by October 1st of each year. Information pertaining to Good Housekeeping and Pollution Prevention required for reporting includes:

- A summary of any written procedures developed or modified during the reporting period;
- A confirmation statement that all high priority facilities were reviewed to determine if SWPPP coverage is needed during the reporting period;
- A list of any new SWPPPs developed during the reporting period;
- A summary of any SWPPPs modified during the reporting period;
- The rationale of any high-priority facilities delisted during the reporting period;
- The status of each nutrient management plan approved, submitted, pending approval or expired; and
- A list of the training activities conducted, including the completion date, the number of employees who completed the training, and the objectives and good housekeeping procedures covered by the training.

3.2 Good Housekeeping & Pollution Prevention Program Updates and Modifications

Modifications to the Good Housekeeping & Pollution Prevention Program may occur as part of an iterative process to protect water quality at any time. Updates and modifications shall be consistent with the conditions of the MS4 Permit and documented in the annual report.

4.0 STORMWATER POLLUTION PREVENTION PLAN

Under the MS4 Permit, NOVA is required to develop and implement stormwater pollution prevention plans (SWPPPs) for the Alexandria, Annandale, Loudoun, and Woodbridge campuses that:

- Identifies areas or "generating sites" with a high potential of generating pollutants or being sources of illicit discharges; and
- Provide procedures to eliminate and/or prevent the sources from entering the MS4.

At the NOVA campuses, these can be related to maintenance and operations activities in specific areas, such as a maintenance yard, or they can be general operations activities that might occur at different locations. Once these areas and activities are identified, staff can be more aware of potential sources of pollutants, make annual inspections of facilities and operations, and provide reporting and follow-up documentation as needed.

4.1 Defining an Illicit Discharge

The conveyance systems of an MS4 are vulnerable to contamination and can carry pollutants in stormwater runoff to receiving waters or wetlands. Substances other than stormwater that enter receiving waters are considered an illicit discharge. An illicit discharge can:

1. Be a measurable flow from a storm drain during dry weather that contains pollutants or pathogens;
2. Have a unique frequency, composition, and mode of entry in the storm drain system;
3. Be caused when the sewage disposal system interacts with the storm drain system; and
4. Be discharges of pollutants from specific source areas and operations known as "generating sites."

For the purposes of NOVA's Good Housekeeping & Pollution Prevention Program, the Virginia Erosion and Stormwater Management Program (VESMP) regulation definition for an illicit discharge is generalized as:

> *<u>Illicit Discharge</u> - Any discharge to an MS4 that is not composed entirely of stormwater, except discharges specifically identified in the Virginia Administrative Code and determined not to be a significant contributor of pollutants to the MS4.*

Most sources of an illicit discharge on the NOVA campuses are likely to originate from a generating site or activity, such as from a vehicle washing area or maintenance area. These could result from daily practices or from a specific spill incident. Table 1 provides some of the source pollutants that could be generated from areas of the campus.

Table 1. Examples of source pollutants of an illicit discharge.

• Automotive fluids (oil, fuel, antifreeze)	• Landscape waste (grass clippings, etc.)
• Cooking oil and grease	• Improperly applied fertilizer
• Solvents	• Sediment
• Paints	• Vehicle wash water
• Chemical cleansers (detergents, soaps)	• Sanitary sewer wastewaters
• Improperly applied pesticides/herbicides	• Dumpster leachate
• Improperly managed salts	• Trash

The regulations do have exemptions for some non-stormwater discharges that would not be considered an illicit discharge if not a significant contributor of pollutants to the MS4. Table 2 includes some of the discharges relevant to NOVA that are not a significant contributor of pollutants and <u>are not considered illicit discharges</u>. If there is uncertainty regarding the source or constituents within an observed discharge, the NOVA Manager, Environmental Services or designee should be contacted immediately so a determination can be made.

Table 2. Examples of sources that are not considered illicit discharges.

• Fire-fighting activities*	• Air conditioning condensate
• Water line flushing	• Footing or foundation drains
• Landscape/lawn irrigation	• Springs
• Diverted stream flows	• Water from crawl space pumps
• Rising groundwater	• Dechlorinated swimming pool discharges
• Uncontaminated groundwater infiltration	• Discharges from potable water sources
• Uncontaminated pumped groundwater	• Flows from riparian habitats and wetlands
• Individual residential car washing	• Street wash water
• Noncommercial fundraising car washes if the washing uses only biodegradable, phosphate-free, water-based cleaners	• Other activities generating discharges identified by the department as not requiring VPDES authorization

* Discharges or flows from fire-fighting activities need only be addressed where they are identified as significant sources of pollutants to surface waters.

Additional detail for identification of an illicit discharge is provided in the NOVA **Illicit Discharge Detection & Elimination Manual**.

4.2 Awareness During Daily Activities and Operations

Potential illicit discharges can be identified and removed prior to entering the storm sewer with effective inspections and appropriate follow-up when pollutants appear to be potentially exposed to precipitation, and subsequently stormwater runoff. NOVA's maintenance and operations staff are in the best position to identify these pollutants such as those identified in Table 1. Figure 2 provides several examples of the observations and actions that could prevent an illicit discharge. If the observer is not qualified or appropriately trained to take the appropriate action, or if illegal dumping is observed, notify the NOVA Manager, Environmental Services or designee.

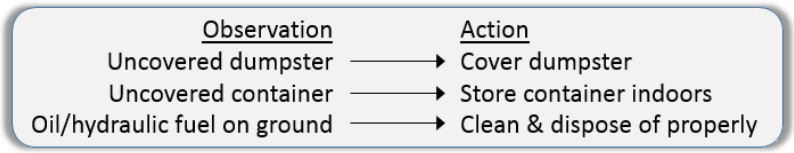

Figure 2. Example daily observations and subsequent actions that can prevent an illicit discharge.

4.3 Special Local Water Quality Concerns

NOVA's MS4 ultimately discharges to receiving waters that have been identified by DEQ to not meet water quality standards. Subsequent studies, called Total Maximum Daily Load (TMDL) studies, have been performed by DEQ. The TMDL studies identify specific pollutants causing the impairments to the receiving waters and designate the amount of the pollutant the receiving water can assimilate to achieve water quality standards. A required reduction of the pollutant is typically assigned to the MS4s that drain to the impaired segment of the waterway. It is important that NOVA's maintenance and operations staff be aware of these special pollutants shown in Table 3.

Table 3. Special pollutants of concern.

MS4 Campus	TMDL	Pollutants of Concern	Approval Date
Annandale	Upper Accotink Creek Sediment	TSS	5/23/2018
	Upper Accotink Creek Chloride	Chloride	5/23/2018
	Chesapeake Bay	N, P	12/29/2010
Alexandria	Chesapeake Bay	N, P	12/29/2010
Woodbridge	Neabsco Creek Watershed	E. coli	07/10/2008
	Chesapeake Bay	N, P	12/29/2010
Loudoun	Chesapeake Bay	N, P	12/29/2010

Nitrogen (N) & Phosphorous (P) considerations: NOVA utilizes its **Nutrient Management Plan** when applying nutrients on campus. This plan includes conservative practices for the use of nutrients such as fertilizer, and how to effectively apply them while minimizing adverse effects. In addition, NOVA utilizes good housekeeping practices and a general sense of awareness for possible nutrient sources in daily operations.

Sediment (Total Suspended Solids (TSS)) considerations: Possible sediment sources include, but are not limited to, construction and maintenance activities, soil erosion, and stockpiles of sediment-laden material. Proper source controls (e.g., silt fence, gutter buddies, etc.) should be utilized to prevent the transportation of sediment. In addition, NOVA should utilize good housekeeping practices and a general sense of awareness for possible sediment sources in daily operations.

Bacteria (E. coli) considerations: Possible bacteria sources include, but are not limited to, animal feces and portable toilets. Proper source controls should be utilized to prevent the transportation of bacteria. In addition, NOVA should utilize good housekeeping practices and a general sense of awareness for possible bacteria sources in daily operations.

Chloride (CL) considerations: Deicing salt applied to roads, parking lots, sidewalks, etc. during the winter months is the primary source of chloride in urban watersheds. Best Management Practices applied to deicing operations and storage of deicing materials will improve water quality while maintaining high standards of public safety during snow and/or ice events.

Polychlorinated biphenyl (PCB) considerations: Possible PCB sources can come from current site activities and previously conducted activities (i.e., legacy activities) and include, but are not limited to, building demolition, contaminated soils, poorly maintained hazardous waste containment associated with handling or storage of PCB materials such as electrical transformers, motor oil, oil-based paint, plastics, and fluorescent light ballasts made prior to 1979. In addition, NOVA should utilize good housekeeping practices' waste management and disposal procedures and a general sense of awareness for possible PCB sources in daily operations.

4.4 Good Housekeeping & Pollution Prevention Inspections

Inspection is an integral practice to NOVA's successful Good Housekeeping & Pollution Prevention Program. The inspection process identifies any items or areas of concern where pollutants have potential to be exposed to precipitation and subsequently discharged to downstream surface waters. If a good housekeeping issue is identified during an inspection, corrective action should immediately be taken to reduce the risk of pollution or contain an existing spill before it reaches the stormwater system.

The SWPPP Inspection Form for inspecting current activities on the NOVA campuses is incorporated via reference. The Manager, Environmental Services or designee shall use this form during inspections as part the annual SWPPP inspection that is required by the MS4 Permit. The inspection serves not only as a means to identify potential issues, but also as documentation that shows NOVA is actively working to prevent illicit discharges in conformance with the MS4 Permit. The MS4 Permit requires an annual SWPPP inspection for each campus; however, because Good Housekeeping & Pollution Prevention plays an integral part in daily operations and is often the first means to prevent pollutants from entering waterways, it is recommended that SWPPP areas are visually inspected on a regular basis. Any maintenance staff who performs a periodic inspection should use the SWPPP Map and SWPPP Inspection Form together and provide the completed inspection form to the Manager, Environmental Services. Completed inspection forms shall be kept on record for three years with the Manager, Environmental Services or designee.

Section 5.0 outlines critical items relevant to Good Housekeeping & Pollution Prevention along with Best Management Practices that should be employed. These sections provide a means to review relevant information prior to a site inspection, a platform on which to conduct training, and as a reference for corrective action in the case that a potential pollution issue is found.

4.5 SWPPP Map

The Stormwater Pollution Prevention Plan (SWPPP) map, incorporated by reference, is intended to relate on-the-ground field operations with Maintenance and Operational Procedures identified in Section 5.0 of this Manual. The map is based on field investigations where the NOVA campuses were evaluated to determine operations and activities that could potentially generate pollutants.

This map should be utilized during Good Housekeeping & Pollution Prevention inspections of each campus. The front of the map shows the campus and several important components associated with pollution prevention. The MS4 stormwater pipes are depicted along with flow direction arrows, and outfalls are indicated by a yellow triangle and points of discharge are indicated by an inverted triangle. Receiving surface waters are also indicated. Red circles indicate potential generating sites, or locations where specific operations occur that could potentially be sources of pollutants. These areas are numbered sequentially, such that a person can efficiently walk the site to perform inspections.

The back of the SWPPP Map corresponds with areas identified on the front of the map. For each area, the activity and associated pollutant(s) that could possibly be generated at the location is summarized. For each location, applicable Best Management Practices, the possible pollutants, and identified controls available for addressing sources of pollutants are provided. A reference to the appropriate subsection of the Good Housekeeping & Pollution Prevention Manual is also provided if additional information is necessary to address a concern.

5.0 MAINTENANCE & OPERATIONS PROCEDURES

The following sections review common procedures and operations that take place at specific locations on the NOVA campuses. These operations may be potential sources of pollutants that can enter and contaminate the stormwater system and the receiving downstream waters. An overview of risk factors associated with each operation is provided, in addition to suggested Best Management Practices to help reduce the potential for contamination.

5.1 Vehicle Washing

Improper vehicle washing can introduce a number of compounds into the MS4, including solvents, grease, sediment, and petroleum products as point source pollution (illicit discharge). Washing vehicles near any part of the MS4, including inlets, ditches, or other conveyances that lead to the storm sewer system, may cause these compounds to pollute a nearby waterway. In order to avoid this, wash vehicles away from the storm sewer system and areas such as mixing pads, staging areas, or other hardened surfaces where vehicle washing is not permitted. State vehicles and equipment may either use the Annandale wash bay located at the Building and Grounds Building, a commercial car wash facility or a mobile vehicle wash vendor.

Best Management Practices

- ✓ Wash in designated wash bays that drain directly to the sanitary sewer.
- ✓ Use commercial car washes.
- ✓ Use a mobile vehicle wash vendor with a self-contained system that captures and properly disposes of wastewater offsite. Ensure no washwater is discharged from operations.
- ✓ Wash vehicles on pervious surfaces, such as grass (only water - no soap, detergents, wax, etc.).
- ✓ Use nozzles that automatically turn off water when not in use.
- ✓ If detergents or cleaners must be used, collect wash water and dispose of in the sanitary sewer using berms or pumps. Alternatively, use biodegradable detergents/cleaners and ensure that wash water is directed onto a pervious surface (i.e., grass).
- ✓ If washing is done outdoors on a flat pervious surface, the washing area should be visually inspected after each washing event to ensure that no unexpected pollutant sources are visually apparent in the wastewater.
- ✓ Utilize written checklist inspections at least once annually.

Maintenance Schedule

Immediately place source controls where an identified issue is a potential concern to water quality. Conduct maintenance on the pollutant source as soon as practicable. The Manager, Environmental Services or designee should retain records of any maintenance work and store on site alongside this document.

Commonly Generated Potential Pollutants

- ❖ Vehicle soap or solvents
- ❖ Oil and hydraulic residue
- ❖ Sediment

5.2 Vehicle/Equipment Maintenance

Vehicle and equipment maintenance practices involve a number of solvents, petroleum products, and other toxic compounds that must be stored and handled in accordance with procedures that prevent potential contamination of the MS4 or receiving waterways.

Best Management Practices

For general maintenance:

- ✓ Vehicles/equipment should be maintained inside and under cover with the exception of emergency maintenance not involving fluids.
- ✓ Vehicles/equipment that are leaking any fluids should be put inside and under cover unless a drip pan can be utilized and emptied into the designated hazardous waste containers.
- ✓ Wastewater should be disposed of in the sanitary sewer only.
- ✓ Remove leaking vehicles/equipment from service until repaired.
- ✓ Store leaking batteries in a secondary container.
- ✓ Use detergent-based or water-based cleaning systems instead of organic solvents and degreasers.
- ✓ Train staff in spill cleanup so that leaks and spills are addressed in a timely fashion.
- ✓ Utilize written checklist inspections at least once annually.
- ✓ Maintenance shops must use approved refrigerant recovery equipment when servicing air conditioning systems in motor vehicles. Technicians using refrigerant recovery equipment must be trained and certified by an EPA-approved organization. To comply with the requirements, service shops must send the Motor Vehicle Air-Conditioning (MVAC) Certification form to EPA along with the facility name and address, name of equipment manufacturer, equipment model and serial number, and a manufacture date. Maintain records for three years of the technician certifications and the name and address of the reclamation facility.

Maintenance Schedule

Immediately place source controls where an identified issue is a potential concern to water quality. Conduct maintenance on the pollutant source as soon as practicable. The Manager, Environmental Services or designee should retain records of any maintenance work and store on site alongside this document.

Commonly Generated Pollutants

- ❖ Oil and hydraulic fluid
- ❖ Antifreeze
- ❖ Batteries
- ❖ Grease
- ❖ Fuel

5.3 Vehicle/Equipment Storage

Vehicles and equipment are stored on the campuses due to seasonal operations such as snow removal, infrequent use, etc. Vehicles and equipment are potential sources of pollutants into the MS4 and other receiving waterways, and therefore, must be stored appropriately. Maintenance should take place in designated locations indoors or under cover, otherwise special care should be taken to ensure spilled or leaked fluids are contained.

Best Management Practices

- ✓ Store vehicles/equipment inside or under cover, if possible.
- ✓ If vehicles/equipment must be stored outside, locate vehicles away from storm drains should leaking occur.
- ✓ Leaking vehicles/equipment should be placed inside or undercover unless a drip pan can be utilized and disposed of into designated waste containers.
- ✓ Clean up any observed spills or leaks and address the source. Ensure that parking areas are free of sediment and debris. Street sweep or clean as required to reduce mobilization of materials in stormwater.
- ✓ Regularly inspect individual pieces of equipment.
- ✓ Train staff in spill cleanup so that leaks and spills are addressed in a timely fashion.
- ✓ Utilize written checklist inspections at least once annually.

Maintenance Schedule

Immediately place source controls where an identified issue is a potential concern to water quality. Conduct maintenance on the pollutant source as soon as practicable. The Manager, Environmental Services or designee should retain records of any maintenance work and store on site alongside this document.

Commonly Generated Pollutants

- ❖ Coolant (Antifreeze) – Typically green, yellow, or orange; sometimes pink or blue
- ❖ Oil – Brown or black
- ❖ Fuel – Odor
- ❖ Brake Fluid – Clear, yellow, blue, or red
- ❖ Power Steering Fluid – Red, yellowish brown, reddish brown, or dark brown
- ❖ Transmission Fluid – Pink, red, reddish brown, or black
- ❖ Washer Fluid – Blue or green

5.4 Fueling

NOVA utilizes a number of vehicles for campus maintenance and operations, in addition to other gas-powered equipment. Fuel for fleet vehicles and equipment presents a particularly hazardous set of toxic compounds that can seriously impair the water quality of receiving waterways if spilled or leaked. Extra care must be taken to ensure that staff are adequately trained to avoid spills, clean them if they do occur, and prevent them from entering the storm sewer system or any receiving waterways. Other Best Management Practices can also be employed to reduce the risk, in addition to other procedures in applicable permits governing storage tanks.

Best Management Practices

- ✓ Refuel vehicles and equipment offsite at locations with designated fuel areas.
- ✓ On-site refueling locations should be designed to prevent runoff and spills by having an impervious surface graded away from storm sewer inlets.
- ✓ Fuel stations should be covered by a roof at least as large as the grade break or fuel dispensing area, and this cover should direct stormwater to a perimeter drain or away from the area.
- ✓ Install oil control devices in storm drains or basins that may receive contaminated runoff.
- ✓ Install vapor recovery nozzles to reduce drips and vapor.
- ✓ Routinely inspect refueling structures and equipment for proper function and condition, as well as any signs of corrosion or potential failure. Above ground tanks should be inspected periodically by a professional.
- ✓ Always fill tanks and containers in such a manner as to avoid dripping.
- ✓ Avoid “topping off” or filling beyond the normal fill capacity.
- ✓ Fueling should be supervised and never left unattended.
- ✓ Fuel vehicle and equipment on a hard surface, downgradient, and at the farthest practical distance from any storm drain, conveyance, or waterway.
- ✓ Train staff in spill cleanup so that leaks and spills are addressed in a timely fashion.
- ✓ Utilize written checklist inspections at least once annually.

Maintenance Schedule

Immediately place source controls where an identified issue is a potential concern to water quality. Conduct maintenance on the pollutant source as soon as practicable. The Manager, Environmental Services or designee should retain records of any maintenance work and store on site alongside this document.

Commonly Generated Pollutants

- ❖ Gasoline and Diesel Fuel
- ❖ Waste Oil

5.5 Dumpsters - Solid Waste Collection and Recycling

Dumpsters and trash cans are potential producers of illicit discharges if polluted materials leak and travel to the storm sewer or receiving waterways. However, as with other waste and chemical storage, proper storage and careful handling will minimize exposure. Dumpsters and trash cans without lids or covers allow rainwater to mix with the waste inside and produce polluted leachate that could then spill during unloading. Dumpsters and trash cans must also remain in good condition where nothing can leak out of the bottom and possibly contaminate the storm sewer system and receiving waterways.

Best Management Practices

- ✓ Provide only covered containers, rather than those with completely open tops, to reduce the amount of rainwater entering the container and the potential for leaking during normal use.
- ✓ Place recycling containers, cigarette butt receptacles, and trash dumpsters and cans in high pedestrian traffic areas, building entrances, and sidewalks adjacent to parking lots. Increase the number of containers if overfilling is a problem.
- ✓ Install adequate number and size of temporary trash receptacles for special events.
- ✓ Provide adequate containers at service entrances so trash materials from within the buildings are immediately transferred to covered containers during routine cleaning.
- ✓ If collected trash materials are hauled using a vehicle, install an impermeable liner to contain any leakage during transfer. Wash any leakage in designated wash areas that drain directly to the sanitary sewer.
- ✓ Provide a secure area for dumpster loading and unloading to prevent tampering, unwanted dumping, and damage from other vehicles.
- ✓ Routinely inspect dumpster and trash can lids and other surfaces for deterioration or damage that may cause exposure to stormwater or allow leakage.
- ✓ Ensure only proper materials are loaded into the dumpster to avoid accidental mixing of chemicals or introduction of corrosive materials.
- ✓ Train staff in spill cleanup so that leaks and spills are addressed in a timely fashion.
- ✓ Utilize written checklist inspections at least once annually.

Maintenance Schedule

Immediately place source controls where an identified issue is a potential concern to water quality. Conduct maintenance on the pollutant source as soon as practicable. The Manager, Environmental Services or designee should retain records of any maintenance work and store on-site alongside this document.

Commonly Generated Pollutants

- ❖ Leachate
- ❖ Trash and Debris

5.6 Chemical Storage

NOVA has a number of chemicals on site that are related to routine cleaning and maintenance, and contractors possessing chemicals and chemical-dispensing equipment may also be on campus. All chemicals that could potentially contaminate stormwater and receiving waterways should be clearly marked and stored indoors or in a secure secondary containment outdoors.

Best Management Practices

- ✓ Plainly label containers that could be susceptible to spillage or leakage to encourage proper handling and facilitate rapid response if a spill occurs.
- ✓ Store materials away from high traffic areas and on structures that keep them from coming into contact with the floor.
- ✓ Storage areas, loading, and unloading areas should be covered or enclosed to reduce potential contact with stormwater.
- ✓ Storage spaces and containers should be routinely checked for leaks or signs of deterioration.
- ✓ Provide contract language that requires contractors to appropriately store chemicals and hazardous materials and to be responsible for safe handling and cleanup of any potential spills.
- ✓ Set up periodic pick-up of waste chemicals through a third-party contractor who can assist with providing the proper storage containers and proper disposal.
- ✓ Train staff in spill cleanup so that leaks and spills are addressed in a timely fashion.
- ✓ Utilize written checklist inspections at least once annually.

Maintenance Schedule

Immediately place source controls where an identified issue is a potential concern to water quality. Conduct maintenance on the pollutant source as soon as practicable. The Manager, Environmental Services or designee should retain records of any maintenance work and store on site alongside this document.

Commonly Generated Pollutants

- ❖ Solvents
- ❖ Automotive lubricants
- ❖ Pesticides
- ❖ Fertilizer

5.7 Outdoor Loading

Outdoor loading areas are potential sources of illicit discharge if polluted materials leak during transport to and from vehicles and containers. Spilled materials can mix with stormwater and be carried into receiving waterways, so proper storage and handling is necessary to help minimize exposure.

Best Management Practices

- ✓ If possible, perform outdoor loading under a tarp or covered structure.
- ✓ Preferably load material in dry weather.
- ✓ Avoid positioning loading areas near storm drains.
- ✓ Grade or berm the loading area so that stormwater drains to a dead-end connection or sanitary sewer, rather than a storm drain or waterway.
- ✓ Routinely inspect loading areas for leaks or signs of deterioration that may cause exposure to stormwater or allow leakage.
- ✓ Train staff in spill cleanup so that leaks and spills are addressed in a timely fashion.
- ✓ Utilize written checklist inspections at least once annually.

Maintenance Schedule

Immediately place source controls where an identified issue is a potential concern to water quality. Conduct maintenance on the pollutant source as soon as practicable. The Manager, Environmental Services or designee should retain records of any maintenance work and store on site alongside this document.

Commonly Generated Pollutants

- ❖ Varies based on material being loaded

5.8 Outdoor Material Storage

NOVA stores materials outdoors made of various metals, plastics, erodible materials in bags, or containers with lids. These materials must be stored and handled in accordance with procedures that prevent potential contamination of the MS4 or receiving waterways.

Best Management Practices

- ✓ Store all materials in appropriately labeled containers, if applicable.
- ✓ Avoid placing materials near storm drains.
- ✓ Make sure all outdoor storage containers have lids that are kept closed to prevent stormwater contamination.
- ✓ If materials are too large to store in containers, cover with a tarp and appropriately label the area to indicate the stored materials that are present.
- ✓ Provide perimeter controls for erodible stockpiles of materials such as mulch, sand, and gravel to prevent migration into the stormwater system.
- ✓ Routinely inspect outdoor material storage areas for leaking or corrosion of stored substances.
- ✓ Clean up all migrating materials upon discovery and contain the source of the pollutant to prevent potential contamination of stormwater and waterways.
- ✓ Train staff in spill cleanup so that leaks and spills are addressed in a timely fashion.
- ✓ Utilize written checklist inspections at least once annually.

Maintenance Schedule

Immediately place source controls where an identified issue is a potential concern to water quality. Conduct maintenance on the pollutant source as soon as practicable. The Manager, Environmental Services or designee should retain records of any maintenance work and store on site alongside this document.

Commonly Generated Pollutants

- ❖ Corroded materials
- ❖ Wood preservatives
- ❖ Sediment
- ❖ Mulch

5.9 Outdoor Material Stockpiling

NOVA has material stockpiling areas for the storage of bulk materials such as sand, mulch, and gravel. These materials must be stored and handled in accordance with procedures that prevent potential contamination of the MS4 or receiving waterways. Long-term stockpiling is any material that will remain on site for more than 14 days. Inert demolition debris such as broken asphalt and concrete should only be taken for disposal to approved permitted sites with properly designed, installed, and maintained erosion and sediment perimeter controls in place as determined by the Manager, Environmental Services or designee.

Short-Term Best Management Practices

- ✓ Consider placing material on top of an impermeable membrane for quick clean-up.
- ✓ Consider placing an impermeable membrane on top of the stockpile and secure with cinder blocks/weight.
- ✓ When utilizing a portion of the stockpile, remove only a section of the protective covering to prevent moisture absorption and to minimize exposure to precipitation and wind.
- ✓ Store materials sufficiently away from storm drains or water bodies.
- ✓ Clean up all migrating materials upon discovery and repair the source of the migrating pollutant to prevent potential contamination of stormwater.
- ✓ Routinely inspect outdoor material stockpiles for migrating materials.

Long-Term Best Management Practices

- ✓ For soil stockpile storage over 14 days, cover with a tarp or provide temporary turf stabilization to prevent erosion.
- ✓ Store materials sufficiently away from storm drains or water bodies.
- ✓ Provide three-sided jersey barriers to serve as perimeter controls and sediment barriers. Install additional ESC controls as necessary (e.g., erosion eels, etc.).
- ✓ Provide inlet protection or move stockpile where migrating materials may enter storm drains.
- ✓ Clean up all migrating materials upon discovery and repair the source of the migrating pollutant to prevent potential contamination of stormwater.
- ✓ Routinely inspect outdoor material stockpiles for migrating materials.

Maintenance Schedule

Immediately place source controls where the identified issue is a potential concern to water quality. Conduct maintenance on the pollutant source as soon as practicable. The Manager, Environmental Services or designee should retain records of any maintenance work and store on site alongside this document.

Commonly Generated Pollutants

- ❖ Migrating bulk material

5.10 Salt Storage/Operations

Hard surface treatment materials used during inclement weather, such as deicing salt, should be carefully stored and handled to prevent migration into the storm sewer system and waterways. NOVA stores bulk salt in shipping containers located on campus. The shipping containers are kept closed and locked except during deicing operations. The Woodbridge campus has a salt storage barn. NOVA also stores bags of deicing products on pallets at each campus under roof cover.

No deicing agents containing urea or other forms of nitrogen or phosphorus shall be applied to paved surfaces. For proprietary deicing mixtures, request a letter from the manufacturer stating that no forms of nitrogen or phosphorus are in the product and retain records for three years, or keep a product sheet available for reference.

Best Management Practices

- ✓ Storage, loading, and unloading areas should be covered or enclosed to reduce potential contact with stormwater.
- ✓ Another option for seasonal storage of sand/grit is to cover all outdoor material stockpiling areas with a tarp and secure tarp edges with sandbags or other heavier objects.
- ✓ Clean up all migrating materials upon discovery and repair the source of the migrating pollutant to prevent potential contamination of stormwater.
- ✓ During material delivery or loading, immediately clean spilled or tracked materials.
- ✓ Routinely inspect storage areas for migrating materials or deterioration of containment structures.
- ✓ Any salt spreading equipment and deicing materials should be stored such that they are not exposed to precipitation and subsequent stormwater flows, other than during normal use.
- ✓ Utilize written checklist inspections at least once annually.

Maintenance Schedule

Immediately place source controls where the identified issue is a potential concern to water quality. Conduct maintenance on the pollutant source as soon as practicable. The Manager, Environmental Services or designee should retain records of any maintenance work and store on site alongside this document.

Commonly Generated Pollutants

- ❖ Salts
- ❖ Sand and sediment

5.11 Power Washing

Power washing can concentrate organic sediment, precipitates, surface material, and cleaning solutions into wash water, which is characterized as an illicit discharge if it enters the MS4. Power washing water, cleaning agents, and other compounds should not enter the storm sewer system or waterways. Care should be taken to prohibit the wash water from flowing into the storm sewer, including roof drains, downspouts, and any other conveyances leading to them.

Best Management Practices

- ✓ Identify storm drains and possible conveyances to storm drains prior to commencing with cleaning or washing and take measures to prevent wash water from entering them.
- ✓ Use dry cleanup methods to remove debris prior to washing surfaces.
- ✓ Determine where wash water may pool and vacuum up or allow it to evaporate.
- ✓ Water not containing chemicals or cleaning agents may be allowed to infiltrate in grass or gravel areas. Wash water containing chemical pollutants must be captured and disposed of in the sanitary sewer. Suspended solids and oils must be removed from the wastewater using booms, absorbent pads, or other devices.
- ✓ Apply minimal water and prioritize dirty areas rather than cleaning or pressure washing an entire surface.
- ✓ Inspect work areas after completion to ensure all potential pollutants have been contained and adequately disposed of.

Maintenance Schedule

Immediately place source controls where the identified issue is a potential concern to water quality. Conduct maintenance on the pollutant source as soon as practicable. The Manager, Environmental Services or designee should retain records of any maintenance work and store on site alongside this document.

Commonly Generated Pollutants

- ❖ Sediment
- ❖ Detergents

5.12 Pesticide Application

Anywhere pesticides and herbicides, even when used occasionally, are used or loaded into equipment is subject to an accidental discharge into the MS4. Care should be taken to properly store, handle, and apply these chemicals in much the same manner as other hazardous materials, and only adequately trained staff should be responsible for their use. Applications of pesticides and herbicides over waters of the state or at water's edge are governed under a separate NPDES permit from DEQ.

Use of pesticides and herbicides should always be performed following the manufacturer's recommendations. Application of materials shall not exceed levels set by the manufacturer.

Best Management Practices

Application:

- ✓ Pesticide and herbicide application must be done by a certified applicator.
- ✓ Apply herbicides and pesticides only after other, non-chemical approaches fail.
- ✓ Determine which products are the most useful and least environmentally harmful for a given situation and use sparingly and in accordance with the manufacturer's recommendations.
- ✓ Use chemical products only during weather conditions appropriate for the application and that will not potentially mix with stormwater in a rain event.
- ✓ Avoid applying chemicals within 5 feet of pavement, 25 feet of storm drain inlets, or 50 feet from a waterway.

Spill Prevention:

- ✓ Spray equipment must be emptied of solutions before loading into vehicles, transportation, and storage.
- ✓ Wash water from application equipment must be disposed of in the sanitary sewer and any leftover material resealed in a container or disposed of at a hazardous waste collection location.
- ✓ Store materials in a secure location and keep containers clearly labeled.
- ✓ Routinely inspect storage areas for leaks or signs of deterioration that may cause exposure to stormwater or allow leakage.

Maintenance Schedule

Immediately place source controls where the identified issue is a potential concern to water quality. Conduct maintenance on the pollutant source as soon as practicable. The Manager, Environmental Services or designee should retain records of any maintenance work and store on site alongside this document.

Commonly Generated Pollutants

- ❖ Pesticides

5.13 Street Sweeping

Streets and parking areas are prone to collect and concentrate significant amounts of materials that contribute to polluted runoff into storm sewer systems and receiving waterways. Sediment, debris, trash, automotive fluids, road salt, and trace metals can be minimized by such practices as street sweeping. Standard street sweeping vehicles can be employed for roadways and parking lots with curb and gutter, while smaller equipment can be used in other hardscape areas where material accumulates. In addition to reducing the chance and severity of polluted discharges into receiving waterways, the practice also extends the useful life of stormwater basins by reducing the sediment load.

Best Management Practices

- ✓ Establish a schedule that best addresses the rate of accumulation of materials on pavement and hardscapes and adjust the schedule after significant events such as snowfall (sand, salt).
- ✓ Materials collected during cleaning activities should not be temporarily stored on site. If stored on site, dewater the material, and then move the material to a location away from water bodies and drainage systems. Provide perimeter controls at the location until such time that the material can be hauled offsite.
- ✓ Equipment washout areas should be kept clean and inlets free of debris and sediment to prevent bypass. Use the minimum amount of water to wash equipment.

Maintenance Schedule

Immediately place source controls where the identified issue is a potential concern to water quality. Conduct maintenance on the pollutant source as soon as practicable. The Manager, Environmental Services or designee should retain records of any maintenance work and store on site alongside this document.

Commonly Generated Pollutants

- ❖ Sediment
- ❖ Trash
- ❖ Heavy Metals
- ❖ Automotive lubricants

5.14 Parking Structure Cleaning

Parking structures can accumulate the same materials associated with parking lots, roads, and vehicle storage areas. Automotive lubricants, oils, and antifreeze, even in covered areas of a garage, may be swept into the storm drain system or tracked elsewhere by way of stormwater or vehicle tires. An additional, larger concern with parking structures is the need to apply sand and salt more often than regular parking lots, as the structure will freeze before the ground. These materials can accumulate in significant amounts and pose a serious threat to receiving waterways, clog stormwater drains, as well as increase the sediment load to stormwater basins. Regular parking structure cleaning will extend the useful life of stormwater basins and reduce accumulation in inlet sumps and downstream transport.

Best Management Practices

- ✓ Contract a local street sweeping service provider to clean accessible areas of the parking structure. Use smaller, more portable machines to access tighter spaces. Clean remaining areas with vacuum recovery surface cleaners, rather than standard power washers.
- ✓ If vacuum recovery cleaners cannot be employed, all power washing material and wash water must be prevented from entering the stormwater system. Use a series of dams, berms, and diversions to isolate water and material for recovery. Water may be allowed to evaporate, at which point leftover material can be collected. Only wash water free of oils, grit, and material that could clog pipes should be disposed of in the sanitary sewer.
- ✓ Materials collected should be directly transported to an offsite landfill.
- ✓ Ensure oil leaks and spills are managed appropriately. If leaking vehicles are stored in parking garages or structures, consider moving the vehicle away from storm drains and placing a drip pan beneath the leaking equipment. Captured leaking fluids should be disposed in designated hazardous waste containers.
- ✓ Install inlet protection before performing any maintenance operations where sediment or other pollutants could enter the storm system.

Maintenance Schedule

Establish a schedule that best addresses the rate of accumulated salt and sand on parking structures and amend the schedule as needed after precipitation events. The Manager, Environmental Services or designee should retain records of any maintenance work and store on site alongside this document.

Commonly Generated Pollutants

- ❖ Oil and hydraulic fluid
- ❖ Antifreeze
- ❖ Grease
- ❖ Fuel

5.15 Storm Drain Maintenance

Storm drains are often the point of entry into the storm sewer system, and they need to be cleaned and maintained on a regular basis to reduce the amount of pollution, trash, and debris into receiving waterways. Clogged drains can overflow, thereby increasing the volume of water flowing into downstream structures and waterways, as well as the chances for damage and erosion.

Best Management Practices

- ✓ Maintain an accurate storm sewer map and information table depicting all components of the MS4 and receiving waterways.
- ✓ Establish a routine inspection schedule for observing structural conditions and for screening potential illicit discharges.
- ✓ Utilize a vacuum truck for emptying materials trapped in drainage inlets and junction sumps or otherwise dispose of materials in accordance with state and federal regulations.
- ✓ Keep impervious surfaces clean of trash, debris, and sediment.
- ✓ Mark drainage inlets to maintain public awareness about illegal dumping.

Maintenance Schedule

Immediately place source controls where the identified issue is a potential concern to water quality. Conduct maintenance on the pollutant source as soon as practicable. The Manager, Environmental Services or designee should retain records of any maintenance work and store on site alongside this document.

Commonly Generated Pollutants

- ❖ Trash and debris
- ❖ Sediments
- ❖ Oil and Grease
- ❖ Antifreeze
- ❖ Paints
- ❖ Cleaners and solvents
- ❖ Pesticides
- ❖ Fertilizers
- ❖ Animal waste
- ❖ Detergents

5.16 Exterior Building Maintenance

Maintenance of building exteriors may involve many different practices such as cleaning, painting, roof resealing, HVAC coil cleaning, and resurfacing. Pressure washing can concentrate organic sediment, precipitates, surface material, and cleaning solutions into the wash water, which is characterized as an illicit discharge if it enters the MS4. Care should be taken to prohibit fluids from flowing into roof drains, downspouts, and any other conveyances leading to them.

Best Management Practices

Cleaning:

- ✓ Identify storm drains and possible conveyances to storm drains prior to commencing with cleaning or washing and take measures to prevent wash water from entering them.
- ✓ Use dry cleanup methods to remove debris prior to washing surfaces.
- ✓ Determine where wastewater may pool and vacuum up or allow it to evaporate.
- ✓ Water not containing chemicals or cleaning agents may be allowed to infiltrate in grass or gravel areas. Wash water containing chemical pollutants must be captured and disposed of in the sanitary sewer. Suspended solids and oils must be removed from the wash water using booms, absorbent pads, or other devices.
- ✓ Prioritize dirty areas rather than cleaning or pressure washing an entire area.

Painting:

- ✓ Use water-based paints and thinners instead of oil-based whenever possible.
- ✓ Mix paint indoors before starting work to minimize the potential for spills entering the MS4.
- ✓ When spray painting, use smaller paint containers with high pressure sprayers to minimize waste.
- ✓ Clean water-based paint off brushes in a sink connected to the sanitary sewer. Oil-based paint waste must be reused, recycled, or disposed of as hazardous waste.
- ✓ Use impermeable drop cloths.
- ✓ Immediately clean up all spills when they occur.
- ✓ Recycle or donate excess paint.
- ✓ Allow paint containers to completely dry before disposal.

Maintenance Schedule

Immediately place source controls where the identified issue is a potential concern to water quality. Conduct maintenance on the pollutant source as soon as practicable. The Manager, Environmental Services or designee should retain records of any maintenance work and store on site alongside this document.

Commonly Generated Pollutants

- ❖ Paints and Solvents

5.17 Landscape Management

Typical landscape maintenance practices can produce contaminants which may pollute receiving waterways. Maintaining an attractive campus landscape can involve activities such as pruning, mulching, watering, and fertilizing. Steps can be taken to reduce the harmful effects of these practices on the storm sewer system and receiving waterways by keeping maintenance crews adequately trained in best management practices.

Nutrient Management Plans are developed for all lands owned by NOVA. Application of fertilizer shall not exceed maximum application rates established by the current Nutrient Management Plans or manufacturer's recommendations. Staff should never apply any de-icing agents containing urea or other forms of nitrogen or phosphorus to parking lots, roadways, sidewalks, or other paved surfaces.

Best Management Practices

- ✓ Compost lawn wastes and re-till into the soil of planting areas or mix into mulch.
- ✓ Minimize turf areas by planting groundcovers, wildflowers, and shrubs, thereby reducing mowing and water requirements.
- ✓ Select drought and heat resistant turf species, and do not cut turf shorter than 3 to 4 inches. Mulching mower clippings should be left on the turf as a natural fertilizer, and ensure clippings are swept away from paved surfaces.
- ✓ Replace exotic plant species when necessary with regional, indigenous plants, which are typically more water efficient and disease resistant.
- ✓ Utilize low-volume irrigation methods and only water areas as needed to enhance plant root growth and avoid excessive runoff.
- ✓ Avoid stockpiling materials leftover from landscape maintenance. For temporary storage of landscaping materials provide erosion and sediment control measures. Install composting facilities for light litter and remove other materials to an offsite recycling/composting facility.
- ✓ Routinely inspect work areas to ensure materials do not migrate to the storm sewer system or receiving waterways.

Maintenance Schedule

Immediately place source controls where the identified issue is a potential concern to water quality. Conduct maintenance on the pollutant source as soon as practicable. The Manager, Environmental Services or designee should retain records of any maintenance work and store on site alongside this document.

Commonly Generated Pollutants

- ❖ Sediment
- ❖ Landscape Materials
- ❖ Fertilizers & Pesticides

5.18 Road and Sidewalk Maintenance

Campus roads and sidewalks are traveled frequently by campus users and for maintenance activities. Vehicles and pedestrians on sidewalks have the potential to contaminate the MS4 and receiving waterways, but careful maintenance of these areas will prevent these consequences from occurring. Staff should never apply any de-icing agents containing urea or other forms of nitrogen or phosphorus to parking lots, roadways, sidewalks, or other paved surfaces.

Best Management Practices

Roads:

- ✓ Ensure roads are free of sediment, vehicle pollutants, and debris. Street sweep or clean as required.
- ✓ Ensure oil drippings and spills are managed appropriately. If leaking vehicles are stored in the street, consider moving the vehicle away from storm drains and placing a drip pan beneath the leaking equipment. Captured fluids should be disposed of in designated hazardous waste containers.
- ✓ Park maintenance equipment and portable toilets away from storm sewer connections.
- ✓ Install inlet protection before performing any maintenance operations where sediment or other pollutants could enter the storm system.

Sidewalks:

- ✓ Ensure sidewalks are free of trash, fertilizers, grass clippings, gum, and bird droppings. Broom sweep, blow, or clean as required.
- ✓ Pick up and properly dispose of trash. Broom sweep fertilizers and grass clippings back into lawn areas.
- ✓ Use only biodegradable phosphate-free, water-based detergents/cleaners to remove gum or clean up bird waste.

Maintenance Schedule

Immediately place source controls where the identified issue is a potential concern to water quality. Conduct maintenance on the pollutant source as soon as practicable. The Manager, Environmental Services or designee should retain records of any maintenance work and store on site alongside this document.

Commonly Generated Pollutants

- ❖ Fuel
- ❖ Oil
- ❖ Hydraulic Fluids
- ❖ Grease
- ❖ Trash
- ❖ Fertilizer
- ❖ Grass Clippings
- ❖ Gum
- ❖ Bird Waste

5.19 Dewatering Structures

Dewatering structures are devices designed to temporarily settle, and filter water discharged from dewatering activities by means of pumping for utility construction and various maintenance activities. The purpose is to filter the sediment-laden water prior to the water being discharged off-site.

Best Management Practices

- ✓ A well-stabilized, vegetated area on site may be used to filter sediment, if the area can withstand the velocity of the discharged water without eroding; and a minimum of 75 feet filtering length must be available.
- ✓ Size and operate a dewatering structure to allow pumped water to flow through the filtering device without overtopping the structure.
- ✓ Portable Sediment Tanks, Filter Boxes and Straw Bales/Silt Fence Pits are all dewatering devices with specific design criteria that can be found in the Virginia Erosion and Sediment Control Handbook Standard and Specification 3.26.
- ✓ An excavated basin (applicable to straw bale/sit fence) may be lined with filter fabric to help reduce scour and prevent inclusion of soil within the structure.
- ✓ Manufactured dewatering devices such as filter bags can also be used per manufacturers' recommendations.

Maintenance Schedule

Immediately place source controls where the identified issue is a potential concern to water quality. Conduct maintenance on the pollutant source as soon as practicable. The Manager, Environmental Services or designee should retain records of any maintenance work and store on site alongside this document.

Commonly Generated Pollutants

- ❖ Sediment

5.20 Absorbent Matting Maintenance

Absorbent matting is designed to catch oils, fuels, and chemicals from leaking vehicles and equipment to ensure materials do not migrate to storm sewer inlets or directly into receiving waterways. They are most effective when covered and not directly exposed to precipitation. However, absorbent matting can be used as a temporary best management practice without cover as long as they are frequently inspected and routinely replaced.

Best Management Practices

- ✓ Place absorbent matting directly under leaking vehicles and equipment.
- ✓ For Facilities that do not have a SWPPP, establish a routine schedule for inspecting, cleaning and replacing matting.
- ✓ Wash matting in wash pad or wash bay where the wastewater will enter sanitary system.
- ✓ Keep surface of matting clean of trash, debris, stone, and sediment.
- ✓ Facilities with SWPPPs should utilize written checklist inspections at least once annually.

Maintenance Schedule

Immediately place source controls where the identified issue is a potential concern to water quality. Conduct maintenance on the pollutant source as soon as practicable. Manager, Environmental Services or designee should retain records of any maintenance work and store on-site alongside this document.

Commonly Generated Pollutants

- ❖ Fuel
- ❖ Oil
- ❖ Hydraulic Fluids
- ❖ Grease

5.21 Discharges of Water Pumped from Construction or Maintenance Activities

Discharges of water pumped from construction or maintenance activities (e.g. waterline flushing and emergency utility repairs) can carry pollutants into the storm sewer system and affect nearby waterways. Such discharges, that are not otherwise covered under another permit, should be properly contained and managed. Water pumped from emergency repairs or maintenance activities has potential to carry pollutants such as sediment, fuels, oil, debris, nutrients, and solvents. Discharge of water from such activities should be filtered or contained using point source controls.

Best Management Practices

- ✓ Utilize erosion and sediment control measures to contain discharges and prevent sediment laden waters from leaving the site/facility.
- ✓ Pumped water should be directed through a filtering device consistent with the Virginia Stormwater Management Handbook specifications.
- ✓ If possible, place dewatering bags or structures in well-vegetated areas.
- ✓ Pump water to upland areas away from waterways and storm drains, when possible.
- ✓ Provide and maintain natural buffers around surface waters and use inlet protection when activities are occurring in close proximity to storm drains.
- ✓ Prevent discharge of soaps, solvents, and detergents into stormwater. Utilize protective coverings over-pollutant generating storage areas to prevent contact with stormwater.

Maintenance Schedule

Immediately place source controls where the identified issue is a potential concern to water quality. Conduct maintenance on the pollutant source as soon as practicable. The Manager, Environmental Services or designee should retain records of any maintenance work and store on-site alongside this document.

Commonly Generated Pollutants

- ❖ Sediment
- ❖ Hydraulic Fluids
- ❖ Fuel
- ❖ Oil
- ❖ Debris
- ❖ Cleaners and Solvents

5.22 Fertilizer Use and Storage

Fertilizer and organic nutrients are used in landscaping and vegetation management practices to enhance and promote growth of vegetation. Safe storage and handling of fertilizers is important for the health and safety of the public and for protection of the environment. Fertilizers that runoff into waterways can lead to excessive aquatic plant growth and impact waterways negatively in many ways. In addition, excess nutrients can negatively affect drinking water sources and recreational activities.

Application of fertilizers shall not exceed maximum application rates established in applicable Nutrient Management Plans. For areas in which a Nutrient Management Plan has not been established, application rates should not exceed manufacturer's recommendations.

Best Management Practices

- ✓ Purchase only enough fertilizer products necessary for one season.
- ✓ Consider alternative landscape techniques such as xeriscaping.
- ✓ Store fertilizers in a designated area, away from surface waters and storm drains. Fertilizers should be stored separately from pesticides and other chemicals and be protected from extreme heat and flooding.
- ✓ A spill kit should be within 25 ft of the storage area for prompt responses to spill. Clean-up spills and dispose of spilled material following manufacturer's instructions.
- ✓ Keep inventory and records of fertilizers within the facility and maintain records of dates of purchase, and quantities used on sites.
- ✓ Care should be taken when transporting fertilizers to sites, ensure materials are in enclosed containers and secured within vehicles bed. Keep a spill kit within all vehicles transporting fertilizers.
- ✓ Report any uncontained spills or releases of fertilizers into surface waters.

Maintenance Schedule

Immediately place source controls where the identified issue is a potential concern to water quality. Conduct maintenance on the pollutant source as soon as practicable. The Manager, Environmental Services or designee should retain records of any maintenance work and store on-site alongside this document.

Commonly Generated Pollutants

- ❖ Phosphorus
- ❖ Nitrogen

5.23 Temporary Storage of Landscaping Materials

Landscaping activities sometimes require temporary stockpiling of outdoor materials such as leaf litter, mulch, and gravel. These materials must be stored and handled in accordance with procedures that prevent potential contamination of MS4 or receiving waterways. Short-term storage is defined as any material stockpile that remains in place for more than 14 days.

Short Term Best Management Practices

- ✓ If possible, store materials under a covered area or consider placing an impervious membrane on top of the stockpile and secure with weight, such as cinder blocks.
- ✓ Store materials away from storm drains and waterways.
- ✓ Clean up any migrating materials upon discovery and repair the source of migrating pollutant to prevent contamination of stormwater.
- ✓ Routinely inspect material stockpiles for migrating materials.

Long Term Best Management Practices

- ✓ Avoid stockpiling materials leftover from landscape maintenance.
- ✓ Order materials for delivery as close to the time of use as possible to reduce the amount stored at the facility. Avoid ordering more materials than is needed for a season.
- ✓ Contain landscaping waste by using bagging equipment or creating temporary stockpile areas. Dispose of debris collected at a proper facility.
- ✓ Compost lawn wastes and re-till into the soil of planting areas or mix into mulch.
- ✓ If possible, store materials under a covered area.
- ✓ For stockpile storage over 14 days, use coverings or provide temporary stabilization.
- ✓ Store materials away from storm drains or waterways and direct flow paths.
- ✓ Install perimeter controls and sediment barriers, such as silt fence, three-sided jersey barriers, or erosion waddles.
- ✓ Install inlet protection where materials have potential to enter the storm drain.
- ✓ Routinely inspect and maintain outdoor material storage areas.

Maintenance Schedule

Immediately place source controls where the identified issue is a potential concern to water quality. Conduct maintenance on the pollutant source as soon as practicable. The Manager, Environmental Services or designee should retain records of any maintenance work and store on-site alongside this document.

Commonly Generated Pollutants

- ❖ Debris (i.e. tree trimmings, branches, weeds, brush, leaves, grass-clippings)
- ❖ Sediment
- ❖ Animal waste
- ❖ Pesticides
- ❖ Fertilizer

6.0 WASTE MANGEMENT & DISPOSAL PROCEDURES

Responsible management of chemical and materials wastes can greatly reduce the amount of pollution in stormwater runoff. The following sections describe the recommended procedures for managing and disposing of waste materials NOVA staff may encounter. For any of the materials listed below, always see the Safety Data Sheets (SDS) if available. The Good Housekeeping & Pollution Prevention Manual is not meant to supersede or replace any Material Safety Data Sheet or manufacturer's instructions but rather supplement them and further reduce stormwater pollution.

6.1 Aerosol Cans

Aerosol cans may be managed as universal waste if they are sent to a vendor for recycling. Store cans in a compatible container that always remains closed, except when adding or removing cans. Label the container clearly as: "Universal Waste Aerosol Cans." Mark the container with the Accumulation Start Date (the first day a can is placed inside). Ensure the container is shipped off-site within one (1) year of the start date. Maintain records documenting the final recycling or disposal facility.

Aerosol cans may also be handled as hazardous waste. Store cans in a compatible, closed container (e.g., a steel drum). Label the container as "Waste Aerosol Cans" and "Hazardous Waste." When the container is full, contact the waste vendor for pickup. Retain the hazardous waste manifest (or equivalent disposal record) for at least three (3) years. Follow all applicable generator requirements under 40 CFR 262, which vary based on the quantity of hazardous waste generated.

Recycling cans as scrap metal is permitted if performed safely and in compliance with regulations. Aerosol cans must be fully emptied and punctured onsite using approved equipment. Collected contents must be stored separately, properly labeled, and disposed of as hazardous waste.

6.2 Animal Carcasses

Roadside and property management of animal carcasses is generally dictated by the location and situation, with priority given to ensuring public safety by immediately removing the carcass from the area. Carcasses should be disposed of at a landfill or in a covered dumpster that is frequently emptied.

6.3 Antifreeze

Place used antifreeze in a drum or tank and clearly label as "Used Antifreeze." The container should remain closed when not in use and must be in good condition, with no other fluids being added. Contract a local hazardous waste disposal vendor to transfer the container offsite when it is full and maintain records about the vendor and the final destination of the container for three years.

6.4 Batteries

Traditional alkaline batteries (AA, AAA, C, D, 9-volt) are not regulated by the EPA and can legally be thrown away with other, non-hazardous waste. However, types of batteries that are classified as Universal Waste must be collected, stored, and recycled include: Nickel Cadmium, Nickel Metal Hydride, Lithium Ion, Lithium, Mercury, Silver, Lead Acid, Lead Acid Flooded Cell Batteries, Non-Spillable Lead Acid Batteries, Sodium Batteries, and Potassium Hydroxide.

Recycling vendors are available and may provide a storage container and option to mail the materials to their location, or the batteries can be transported to the nearest recycling facility. Batteries to be recycled should be clearly marked as "Waste Batteries" or "Used Batteries." The battery collection container should have the date that the first battery is collected marked on the outside. Batteries can be stored in the container for up to one year from the marked date. Maintain records for the final destination of the batteries once they leave the site to a recycling facility or vendor for three years.

6.5 Empty Containers

All empty containers should be properly stored to reduce degradation until such time as they are recycled or disposed of at a landfill. Best practices include keeping the containers closed and storing them together in a covered area. Label the containers as "Empty."

- <u>Disposal of empty containers previously storing non-hazardous/non-RCRA materials such as oils and diesel fuel:</u>
  - Empty the containers. Use absorbents such as rags or oil dry (no liquids) to help capture the remaining material. Dispose of the containers.
- <u>Disposal of empty containers previously storing hazardous/RCRA non-acute hazardous materials or wastes such as gasoline, low flashpoint solvents, and some paints</u>:
  - Empty the containers so that the remaining residue at the bottom is one inch or less. Use absorbents such as rags or oil dry (no liquids) to help capture the remaining material. Dispose of the containers.

Containers not yet disposed of or recycled can be kept in a central, secure, storage area. Containers must be closed and clearly labeled "Empty Container – Hazardous Waste" and inspected weekly. Containers can be stored for up to 180 days and disposed of by a hazardous waste vendor. Obtain a hazardous waste manifest from the vendor and keep it on file after disposal for three years.

6.6 E-Waste (Monitors and Computers)

All computers, monitors, and other electronic waste should be properly disposed of and/or recycled through an electronic waste vendor. Maintain records of the final destination of the e-waste from the waste hauler for three years.

6.7 Filters - Oil, Gas, or Diesel

Used filters may either be disposed as solid waste or as hazardous waste under the following conditions:

Used Oil Filters

Oil filters can be disposed of as solid waste when punctured and drained. Drain into an enclosed container labeled "Used Oil." Maintain records of the final destination of the filters from the waste hauler for three years.

Used Diesel Fuel Filters

Diesel fuel filters can be disposed of as solid waste when punctured and drained. Drain into an enclosed container labeled "Used Diesel Fuel." Maintain records of the final destination of the filters from the waste hauler for three years.

Used Gasoline Filters

Used gasoline filters must be managed according to hazardous waste requirements, at or near their point of generation with storage limits up to 55 gallons. Place drained filters into a container labeled "Used Gasoline Filters". Once the 55-gallon threshold is met, the container must be shipped off-site by a hazardous waste hauler. Maintain records of the final destination of the filters from the waste hauler for three years.

6.8 Fluorescent Lamps, HID, and Metal Halide Lights

Types of lamps that are considered Universal Waste under the Resource Conservation and Recovery Act (RCRA) and must be collected, stored, and recycled include: fluorescent bulbs, high-intensity discharge (HID), metal halide, neon, mercury vapor, and high-pressure sodium lights.

Lamps may be collected in an empty box the new ones came in or purchased from a lamp recycling vendor. The lights must be securely stored and unbroken. Label the containers as "Waste Lamps" or "Used Lamps" and indicate the date the first lamp was placed there. Broken bulbs must be contained in leak proof containers. Check with the vendor to see if they will take broken bulbs as well as unbroken ones. Dispose of the lamps at the nearest recycling facility and maintain a record of disposal for three years.

6.9 Fluorescent Light Ballasts (PCB and Non-PCB)

Polychlorinated biphenyls (PCBs) can be present in the solid potting material and in the capacitors of fluorescent light ballasts (FLB) manufactured before 1979, and these devices may still be in use with fluorescent lights in buildings from that era[1]. Non-leaking light ballasts are restricted to disposal in sanitary or industrial landfills with leachate collection, liners, and appropriate groundwater monitoring.

A PCB-containing FLB failure, leak, smoking condition, or fire requires the following:

- Isolate the affected area from central ventilation and ventilate the air separately.
- Relocate persons from the affected area.
- Hire experienced cleanup personnel to clean up and decontaminate equipment and surfaces.
- Comply with environmental regulations for proper storage and disposal of contaminated equipment and cleanup materials.

Storage of Non-Leaking Equipment

- Non-leaking equipment can be stored for 30 days, after which point storage is subject to more stringent requirements.
- Dispose of the non-leaking ballasts as a solid waste in a municipal solid waste landfill.

6.10 Landscape Materials

Leaves, twigs, lawn clippings and brush can accumulate from landscape maintenance activities. Haul landscape waste to a dump that accepts landscape materials.

6.11 Mercury Switches and Equipment

A mercury switch or equipment is any device containing mercury integral to its function (e.g. thermostats, appliances). Spilled or exposed mercury poses significant risk as it can evaporate and become an invisible, odorless and toxic vapor. They are classified as Universal Waste and must be collected, stored, and recycled while intact in the device.

- Collect unbroken mercury switches and equipment in an empty container marked “Waste Mercury Switch/Equipment” or “Used Mercury Switches/Equipment.” Mark the outside of the container with the date the first item is placed in the container.
- Store for up to one year in an enclosed container onsite. Transfer the materials to a local recycling facility or contact the local hazardous waste authority to be properly disposed.
- Maintain a record of the final destination of the equipment for three years.
- If mercury is spilled or exposed, isolate the area and hire experienced professionals to clean up and decontaminate equipment and surfaces.

[1] PCB-containing fluorescent light ballasts that are currently in use have exceeded their designed lifespan and pose significant risk. EPA recommends removing PCB-containing FLBs from buildings as soon as possible to prevent potential inhalation or dermal exposure.

6.12 Oil, Gas, Diesel, and Cooking Grease Waste

Waste fuels and oils must be stored in separate, enclosed containers, such as drums or tanks and clearly labeled as "Used Oil," "Used Diesel Fuel," "Used Gasoline," or "Used Grease." Each container should remain closed unless in use and should remain in a covered, secured area. Contact a waste vendor when the container is full and maintain records from the vendor for three years.

Used oil can be burned provided that:

1. Only used oil that the facility generates or received from household DIYs is burned in the heater,
2. The space heater is rated more than 0.5 million Btu/hr.; and
3. Combustion gases from the space heater are vented to the ambient air.

If the space heater does not meet all the above requirements, Part 279, Subpart G burner standards apply.

6.13 Paint Waste - Latex, Solvent, or Oil-Based

Paints and liquid surface coverings such as polyurethane should be stored in containers that are clearly labeled and remain closed. Store containers in a secure, covered area off the floor.

<u>Latex Paint</u>

Latex paint is non-hazardous, and its containers may be discarded once completely empty and does not contain free liquid. Absorbents can be used to remove any remaining free liquid or spread the paint on cardboard or newspaper and allow the container to dry completely before disposal as solid waste.

<u>Solvent or Oil-Based Paints</u>

These paints, including stains, sealers, and associated thinning agents, should be treated as hazardous waste due to their flammability or hazardous components they may contain. If minor amounts are leftover and cannot be used, use absorbents to remove any remaining free liquid, or spread the paint onto newspaper or cardboard and allow to dry completely before disposal as solid waste. If the quantity is large, contact a hazardous waste disposal vendor and maintain records of the disposal for three years.

6.14 Parts Cleaners

<u>Low-Flashpoint Solvents</u>

Low-flash solvents contained in parts washers become hazardous waste once the solvent becomes too contaminated to clean effectively. Unless the parts washers are under a regularly scheduled service agreement, a hazardous waste vendor should be contacted when the solvents become ineffective at cleaning. Maintain records of the final destination from the waste hauler for three years.

High Flashpoint Solvents

Waste solvents with a high flashpoint are not typically hazardous and can be recycled unless the solvent is tested for pH and toxicity and is determined to be hazardous waste. Contact the vendor for related information or contact a hazardous waste vendor for disposal. Maintain records of the final destination from the waste hauler for three years.

Aqueous Solvents

Waste aqueous solvents are typically not hazardous and can be recycled, unless they have become highly contaminated with materials from the washed parts, such as toxic metals and oils. Unless the spent liquid is tested, it should be assumed that it is hazardous and should be treated as other solvents by a waste vendor. Maintain records of the final destination from the waste hauler for three years.

6.15 Pesticides

Herbicides, insecticides, and fungicides, etc. are all considered pesticides under EPA regulation. Containers should be stored in a covered area on impervious flooring, and containers should be segregated according to type. Ensure all containers are labeled and kept closed and remove only the amount expected to use until the container is empty.

Never pour leftover pesticides down the sink, into the toilet, or down a sewer or street drain. Pesticides may interfere with the operation of wastewater treatment systems or pollute waterways, where they may harm fish, plants, and other living things. Pesticide containers may be managed as a hazardous waste, recycled, or returned to the vendor, as described below.

Partially Full Containers as Hazardous Waste

- Pesticides that cannot be completely used and the containers are partially full should be marked as “Waste Pesticide” or “Used Pesticide.”
- Contact the local hazardous waste authority for disposal as hazardous waste. Maintain a record of the final destination for used pesticide containers for three years.

Empty Containers for Disposal or Recycling

- Containers should be rinsed three times with potable water and disposed of as solid waste or recycled. Save the rinse water in a separate container for future applications. If the rinse water is not reused it must be properly managed. Contact the local hazardous waste authority for guidance on proper disposal.

Partially Full Containers Returned to the Vendor

- Some vendors may accept returned pesticides. Keep all containers clearly marked with original labeling and contact vendor for proper handling and shipment.

6.16 PCB-containing Materials

Dispose of non-liquid PCB-containing materials in a Toxic Substance Control Act (TSCA) approved chemical waste landfill or TSCA-approved incinerator. Dispose of PCB oils in a TSCA-approved incinerator.

6.17 Rags, Wipes, and Absorbents

Disposal methods vary for rags, wipes, and absorbents, depending on the type of substance absorbed and whether they are considered reusable or single-use rags, wipes, and absorbents. They will either fall under the Used Oil Regulation, the Hazardous Waste Regulations, or the Solid Waste Regulations.

Absorbents Used to Capture Used Oil

Waste rags, wipes, and absorbents containing oil (such as motor oil, hydraulic oil, etc.) may be discarded in the trash or laundered at an industrial facility if they are not dripping or completely saturated with oil. Materials that are saturated with used oil should be wrung out or otherwise managed to remove as much free-flowing oil as possible. The extracted oil should be contained with other used oil and recycled by a used oil vendor, and the non-saturated absorbent materials can be discarded in the trash. Any materials that are saturated with oil should be kept in a closed container marked “Used Absorbents” and picked up by a used oil vendor for disposal. Maintain records of the final destination of all materials from the waste hauler for three years.

Absorbents Used to Capture Diesel Fuel

Waste rags, wipes, and absorbents containing diesel fuel may be discarded in the trash or laundered at an industrial facility if they are not dripping or completely saturated with diesel fuel. Materials that are saturated with used oil should be kept in a closed container marked “Used Absorbents.” Contact a used oil vendor when the container is full and keep records of the final destination from the waste hauler for three years.

Absorbents Used to Capture Hazardous Materials

Waste rags, wipes, and absorbents containing hazardous materials such as gasoline, solvent or oil-based paint, and some solvents and cleaners must be managed as hazardous waste. Collect the materials into a barrel or bucket with a tightly fitting lid and marked as “Waste Absorbents” and contact a hazardous waste vendor when full and keep records of the final destination from the waste hauler for three years.

6.18 Refrigerants

Refrigeration and air conditioning equipment such as small appliances and motor vehicles containing refrigerants and/or insulating foam must use recovery or recycling equipment certified to meet EPA standards or sent offsite to an EPA-certified reclamation facility. Maintain records for three years of the technician certifications or the name and address of the reclamation facility. Recovered refrigerant may be destroyed or stored safely to prevent emissions. If recovered refrigerant is sent for destruction, the shipment must be sent to a destruction facility which meets specific Clean Air Act and Resource Conservation and Recovery Act requirements for destruction and removal efficiency. Maintain all disposal records for at least three years.

6.19 Scrap Tires

The primary means of scrap tire disposal is recycling through a registered waste tire hauler or at a scrap tire facility. If tires cannot be recycled, they can be taken to a landfill that accepts waste tires. Virginia regulation states that no more than 100 scrap tires may be stored on site at any one time without a Solid Waste Permit. When the tires are transported offsite, keep records of the final destination for three years.

6.20 Solid Waste Trash

All solid items not recycled or managed as hazardous waste may be considered as solid waste and disposed of using a trash collection service or municipal landfill. Liquids generally cannot be disposed of in regular trash collection services and the local hazardous waste authority should be consulted if suspect liquids are in the waste collection. Recycling vendors may collect additional liquid waste that are not listed in this document.

Waste should be collected in bags that are securely closed and transferred to a lidded dumpster in good condition. Loose trash from unsecured collection could blow into stormwater drainage areas or come in contact with stormwater and potentially contribute pollutants into receiving waters.

6.21 Surplus and Excess Property

Materials and property that are no longer in use and stored should be managed carefully so that they are expeditiously transferred to their next user or location. Materials should not be stockpiled in locations where they might deteriorate and potentially cause pollutants to enter the stormwater.

6.22 Treated Lumber

The priority for treated timber is to first find potential for reuse in another project. If the materials are being discarded, conditions apply based on the chemicals used to treat the wood.

Timber Treated with Chromated Copper Arsenate (CCA)**:**
The Resource Conservation and Recovery Act (RCRA) exempts CCA treated lumber from hazardous waste regulation if the wood is in the same form, it was for its intended use. Mulch, for example, is not exempt and cannot be legally sent to the landfill.

Timber Treated with Creosote:
Though not required by EPA regulation on weathered wood, a disposal facility may require Toxic Characteristic Leachate Testing (TCLP) prior to disposal. New creosote treated timber must be tested to determine if it is hazardous prior to disposal. Contact the local hazardous waste authority for further guidance on testing.

Timber Treated with Pentachlorophenol (PCP):
All PCP treated timber must be tested prior to disposal. Contact the local hazardous waste authority for guidance

7.0 SALT MANAGEMENT STANDARD OPERATING PROCEDURES

The salt management standard operating procedures address the MS4 General Permit requirements concerning NOVA's Accotink Creek Chloride TMDL Action Plan. This is accomplished by adaptive management of maintenance operations, implementation of best management practices recommended in the SaMS Toolkit, tracking salt usage, conducting training for applicable staff, and educating NOVA's students, faculty and staff.

The Buildings and Grounds (B&G) staff adhere to NOVA's Master Snow Book incorporated into this SOP by reference for operational procedures including communication, sequencing, de-icing equipment maintenance, PPE, and spill clean-up. During a snow alert, designated B&G staff are essential personnel for snow removal operations and oversee vendors in the event of lack of B&G staff or an event too large for B&G staff to handle.

7.1 Salt Application Best Management Practices

NOVA implements procedures including implementation of best management practices (BMPs) for anti-icing and deicing agent application, transport, and storage and prohibits the application of any anti-icing or deicing agent containing urea or other forms of nitrogen or phosphorus in Maintenance and Operation 5.10 Salt Operations/Storage.

Best Management Practices

- ✓ Conduct a pre-season meeting.
- ✓ Conduct a post-season meeting.
- ✓ Conduct annual training in best management practices.
- ✓ Properly store deicer materials in a container or in bags that are under cover and not exposed to stormwater.
- ✓ Perform loading and hauling activities of deicers cleanly.
- ✓ Clean up any spills immediately and dispose of waste properly.
- ✓ Routinely clean equipment.
- ✓ Contain wastewater during cleaning operations and dispose of wastewater in the sanitary sewer.
- ✓ Establish a calibration process for salt spreading equipment.
- ✓ Regularly calibrate equipment.
- ✓ Use advanced plows.
- ✓ Use the Hilltip IceStriker 2000 AM spreader on the Annadale Campus.
- ✓ Use the Geotab system on the Annadale Campus.
- ✓ Pre-plan the location of snow piles. Plow snow in designated places preferably not directly upslope from storm drains.
- ✓ Install inlet protection at storm drains downgradient of snow piles.

Enhanced Best Management Practices

NOVA has identified two strategies for implementing enhanced BMPs that promote efficient management and application of anti-icing and deicing agents while maintaining public safety.

- Equipment Upgrades : NOVA enhanced its salt management operations by investing in advanced application technology and real-time tracking systems to ensure salt is applied efficiently, accurately, and responsibly:
    - Hilltip Ice Striker 2000 AM Spreader: Built with a corrosion-resistant polyethylene hopper and a stainless-steel auger, this unit is engineered for precise, consistent material distribution. Its advanced control system enables operators to eliminate material waste and significantly lower total salt usage. Additionally, the unit can be configured for pre-wetting or direct liquid deicing applications, which maximizes melting effectiveness on pavement while minimizing the overall volume of salt required.
    - Geotab Fleet Telematics and GPS Tracking System: This system streams real-time data including vehicle location, speed, engine diagnostics, idling, and driver behavior. As part of ongoing winter maintenance enhancements, NOVA plans on expanding Geotab's capabilities to capture real-time winter operations metrics. This integration tracks active plow routes, equipment engagement, and exact application data for both solid salt and liquid deicers.
- Refining Application Rates: Using the Geotab system, drivers can easily monitor and regulate their speed during application to ensure material remains on target surfaces. The Hilltip Ice Striker 2000 AM spreader's stainless-steel auger and advanced electronic control system deliver a precise, uniform flow rate, eliminating material surges and over-application. Additionally, the unit's corrosion-resistant polyethylene hopper and targeted distribution design ensure granular salt is deposited accurately within designated treatment zones.

7.2 Salt Tracking

To help protect local streams and water quality, NOVA systematically tracks the amount of salt. B&G staff is responsible for recording salt usage data in the B&G Salt Usage Tracker spreadsheet. B&G staff are also responsible for inputting the data obtained from the Contractor Snow Operations Log into the B&G Salt Usage Tracker spreadsheet. The Annandale Campus B&G staff are also responsible for inputting information into the Operational Conditions tab of the B&G Salt Usage Tracker spreadsheet. B&G staff then provides the data to the Manager, Environmental Services, to record the data on the Chloride TMDL tab of the MS4 Tracking Spreadsheet. The MS4 Tracking Spreadsheet was developed utilizing some of the recommendations referenced in the SaMS Toolkit, tailored to align with NOVA's specific capabilities and operational needs. In the future, NOVA may incorporate data from the Geotab Fleet Telematics and GPS tracking system.

7.3 Education and Outreach

NOVA has developed traditional written materials in the form of a flier to be handed out at outreach events and placed on bulletin boards around campus as well as an article published in NOVA's newsletter to address requirements for an anti-icing and deicing agent education and outreach strategy targeting NOVA's staff, faculty and students for increased awareness of anti-icing and deicing agent application impacts on receiving waters.

Secondly, NOVA will implement annual training to address requirements for an anti-icing and deicing agent education and outreach strategy targeting NOVA's maintenance staff that encourages implementation of enhanced BMPs for application, handling, and storage of anti-icing and deicing agents used for snow and ice management. Both anti-icing and deicing agent education and outreach strategies will be implemented biennially. NOVA will document the training on the Training tab of the MS4 Tracking spreadsheet and in the Annual Report.

7.4 Adaptive Management and Review

NOVA will annually review salt tracking usage results and adjust BMP strategies based on observed trends and input from the B&G staff and Facility Managers.

Appendix A: Contractor Good Housekeeping and Pollution Prevention Log

Northern Virginia Community College Contractor Good Housekeeping and Pollution Prevention Log

In accordance with the Commonwealth of Virginia laws and regulations, Northern Virginia Community College (NOVA) is required to implement and enforce written procedures as part of the Municipal Separate Storm Sewer System (MS4) permit program. These requirements are written to prevent to the maximum extent possible a potential discharge of pollutants to the storm sewer system or natural drainage way on NOVA's property. The MS4 Program Plan, Good Housekeeping and Pollution Prevention Manual, Virginia Community College System Standards and Specifications, and Nutrient Management Plan are documents applicable to any work performed on Campus. I understand these written procedures can be accessed on the NOVA's website at https://www.nvcc.edu/about/offices/sustainability/stormwater/index.html and will ensure the established Good Housekeeping and Pollution Prevention procedures will be followed. In the event of a spill on Campus property, I will immediately contact Evan Wright, the Manager, Environmental Services at (703) 764-0543.

Date	Contractor Name	Contractor Duties	Signature	Start Date	End Date

Appendix B: Spill Response Procedures

In the Event of a Spill or Discharge

1. Contact Facilities. If spill is large and hazardous call The Fire Department at 9-1-1. Report an illicit discharge immediately to the Manager, Environmental Services (MES) (703) 764-0543. See IDDE Manual. Report a good housekeeping issue to the MES within 24 hours.

2. Assess the risk. When a spill occurs, determine the risks that may affect human health, the environment and the property. This may be done easily in cases where the type of contaminant spilled is known. In situations where the contaminant is unknown, determining risks may involve some investigation. In cases where the chemical is unknown, the spilled material may be identifiable from the container label or the Safety Data Sheet.

3. Select personal protective equipment (PPE). It is crucial that the appropriate PPE is chosen to stop, confine, and clean up the contaminant. Appropriate PPE may be a pair of gloves, eye and foot protection, or face masks. If the chemical is unknown and the risk level uncertain, use the highest level of caution and protection. Refer unknown chemical cleanup to the Fire Department and do not attempt to cleanup without appropriate guidance.

4. Stop the source. Stopping the source of a spill may involve turning a container upright, plugging a leak or moving an operation. In any case, the source leak or spill should be controlled as quickly as possible.

5. Confine the spill. It is crucial to confine the spill before it reaches waterbodies or storm drains. In some cases, this step may need to occur before stopping the source. The proper containment measures necessary should be assessed based on the size and type of the spill. A small spill may be confined with the application of absorbent, whereas a larger spill may require absorbent pads/socks. Spill kits should be utilized where applicable to block nearby storm drains and prevent the movement of the spill. If a large spill of fuel, sewage, or other hazardous materials occurs, contact the Fire Department to assist in response and cleanup.

6. Evaluate the incident and implement cleanup. Once the spill is stopped and confined, the person responsible for cleanup should develop a plan of action to cleanup the spill. The person conducting the cleanup should make sure that they have enough spill response supplies to adequately deal with the spill. Once the chemical is cleaned up or the absorbents are saturated, they may contain hazardous waste and should be disposed of properly. See the Waste Management and Disposal Procedures section of Good Housekeeping & Pollution Prevention Manual for disposal guidance.

Appendix C: B&G Contractor Snow Operations Log

NOVA Contractor Snow Operations Log

In accordance with the Commonwealth of Virginia laws and regulations, Northern Virginia Community College (NOVA) is required to implement and enforce written procedures as part of the Municipal Separate Storm Sewer System (MS4) permit program. These requirements are written to prevent to the maximum extent possible a potential discharge of pollutants to the storm sewer system or natural drainage way on NOVA's property. The MS4 Program Plan and Section 7.0 of the Good Housekeeping and Pollution Prevention Practices Manual are documents applicable to any snow operations work performed on Campus. I understand these written procedures can be accessed on the NOVA's website at https://www.nvcc.edu/about/offices/sustainability/stormwater/index.html and will ensure the established Snow Removal Operation procedures will be followed. If I have any questions regarding snow operations, I will contact Evan Wright, the Manager, Environmental Services at (703) 764-0543.

				Input Applicable Materials Used		
Date	**Company Name**	**Operator Name**	**Signature**	**Sodium Chloride (NaCl) (Tons)**	**Magnesium Chloride ($MgCl_2$) (lbs.)**	**Other**